Befloxatone

Cat. No.: HY-120017

CAS No.: 134564-82-2

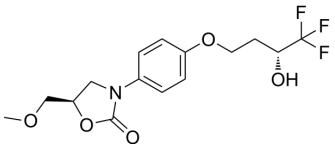
Molecular Formula: $C_{15}H_{18}F_3NO_5$

Molecular Weight: 349.3

Target: Monoamine Oxidase

Pathway: Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Befloxatone (MD-370503) is an orally active, selective and reversible inhibitor of Monoamine Oxidase A (MAO-A) (IC_{50}=4 nM). Befloxatone increases the tissue level of monoamine, striatal dopamine and cortical norepinephrine. Befloxatone has antidepressant potential[1].	
IC_{50} & Target	MAO-A 4 nM (IC_{50})	MAO-B 300 nM (IC_{50})
In Vitro	Befloxatone (100 nM; 0-100 min) reversibly reduces MAO-A activity in rat brain homogenates, while completely lost 60 min later[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
In Vivo	Befloxatone (0.75 mg/kg; i.p.; single dose) increases tissue levels of monoamines and decreases levels of their deaminating metabolites in rats[1]. Befloxatone (1 mg/kg; i.p.; single dose) induces elevated levels of dopamine and corticonorepinephrine in the extracellular striatum of rats, but not elevates levels of corticoserotonin[1]. Befloxatone (0.03-0.3 mg/kg; p.o.; single dose) effectively inhibits the firing rate of serotonergic neurons and partially reduces the firing of norepinephric neurons, but had no effect on the firing of dopaminergic neurons in rats[1]. Befloxatone (1.5 mg/kg; p.o.; single dose) does not enhance the pressor effect of the central active dose of oral tyramine and has a broad safety profile in rats[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

REFERENCES

[1]. Curet O, et al. Preclinical profile of befloxatone, a new reversible MAO-A inhibitor. J Affect Disord. 1998 Dec;51(3):287-303.

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